

DESCRIPTION

Species Reactivity	<i>C. difficile</i>
Specificity	Detects <i>C. difficile</i> Toxin B/TcdB in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant <i>C. difficile</i> Toxin B/TcdB Ser2-Leu543 Accession # P18177
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Clostridium difficile is the leading cause of hospital-acquired diarrhea, known as *C. difficile*-associated disease. The estimated number of cases of *C. difficile*-associated disease exceeds 250,000 per year (1), with health care costs approaching US \$1 billion annually (2). The major virulence factors produced by *C. difficile* are two toxins, TcdA and TcdB. Both toxins can monoglucosylate and inactivate Rho family small GTPases within target cells, leading to disruption of vital signaling pathways in the cell, subsequently causing diarrhea, inflammation, and damage of colonic mucosa (3, 4, 5). Both toxins have a similar tripartite structure comprised of an N-terminal glucosyltransferase domain, a C-terminal receptor binding domain, and a small hydrophobic span possibly involved in toxin translocation (6). Our recombinant TcdB consists of the enzymatic domain. Both TcdA and TcdB also have potassium-dependent UDP-Glc hydrolase activity, which is essentially glucosyltransferase activity with water as the acceptor molecule (7). Under same conditions, UDP-glucose hydrolysis by TcdB occurs at a rate about 5-fold greater than that of TcdA.

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